

ABSTRACT OF THE DISCLOSURE

A gain-clamped semiconductor optical amplifier capable of providing constant gain for output optical signals at substantially all times is disclosed. In particular, the gain-clamped semiconductor optical amplifier according to the present invention comprises a active waveguide having an input and output side; clad layers surrounding the active waveguide; and a grating, which is formed partially at both end parts under the input and output sides of the active waveguide.